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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/535,569	05/19/2005	Kazuhiro Oshika	MAT-8672US	7722
23122	7590	09/05/2007		
RATNERPRESTIA P O BOX 980 VALLEY FORGE, PA 19482-0980			EXAMINER PENDLETON, DIONNE	
			ART UNIT	PAPER NUMBER
			2627	
			MAIL DATE	DELIVERY MODE
			09/05/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/535,569

Applicant(s)

OSHIKA ET AL.

Examiner

Dionne H. Pendleton

Art Unit

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the Remarks/Arguments filed 6/18/2007: “26”, “27” OR “28”.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. **Claims 1 and 2** are rejected under 35 U.S.C. 102(e) as being anticipated by **Tucker (US 6,842,964)**.

Regarding claim 1,

In **figures 4-6**, Tucker teaches a loudspeaker apparatus comprising: an elongate printed circuit board (*see, Figures 2-3*); having a length greater than a width; and a plurality of speakers (*see Figure 4*) mounted on the PCB along its length in a substantially straight configuration, the PCB being for incorporation into a larger housing for cooperation with other electronic elements, thereby inherently including “[*terminals*]” for inputting a signal of the loudspeakers being electrically coupled with a conductive pattern part (*see, “17” in Figure 2*) of the printed circuit board, *see column 10, lines 39-41*;

And wherein signal inputting parts for inputting a signal from the outside are formed by leading the conductive pattern part (*“17” in figure 2*) to at least both ends of the PCB in the longitudinal direction (*see Figure 2, also see column 10, lines 42-45*), and

Wherein **Figure 4** illustrates that each of said loudspeakers covers most of a distance extending from edge to edge of said printed circuit board (*see, portion “29”, as well as the point of connection for the “Back” speakers of Figure 4*).

Regarding claim 2,

Tucker teaches a signal inputting part (17) comprising a conductive pattern on the PCB (**Figure 2**), as well as inherently teaching a terminal. Since the PCB is for integration into a larger electronic device (**see Figure 8**), Tucker is interpreted as inherently teaching that the PCB is coupled with another PCB or printed board of *the main device*.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 3-8** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Tucker (US 6,842,964)** in view of ***Applicant's Admitted Prior Art***.

Regarding claims 3 and 6,

Tucker teaches the invention of claims 1 and 2. Tucker also teaches that the loudspeakers (**see, Figure 4**) are electrically coupled with one another. Tucker does not clearly teach that the impedance is equalized or approximated to an impedance of one loudspeaker. However, the Examiner notes the ***Applicant's Admitted Prior Art (the unchallenged Official Notice from the last Office Action)***, that it is well known in the art and would have been obvious for one of ordinary skill in the art at the time of the invention to include a means for equalizing impedance of the drive signals applied

to the speaker devices, for the purpose of more accurately reproducing the sound radiation pattern of the sensed acoustic signal.

Regarding claims 4 and 8,

Tucker does not clearly teach that the loudspeakers may be connected in series. However, the Examiner notes the ***Applicant's Admitted Prior Art (the unchallenged Official Notice from the last Office Action)***, that it is well known in the art and would have been obvious for one of ordinary skill in the art at the time of the invention to connect the speakers in series, so that the reproduced audio signals are in phase with one another.

Regarding claims 5 and 7,

Tucker teaches the invention of claims 1 and 2, and further teaches in **column 9, lines 30-31**, further coupling of the PCB to additional on-board electronics.

Tucker fails to teach that the electronics includes a high cut filter. However, the Examiner takes Official Notice that further connection of a speaker array to a "high cut filter" as claimed, is well known in the art at would be obvious for the purpose of tuning the output of the audio system to a lower audio band of frequencies.

Response to Arguments

4. Applicant's arguments with respect to claims 1-8 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

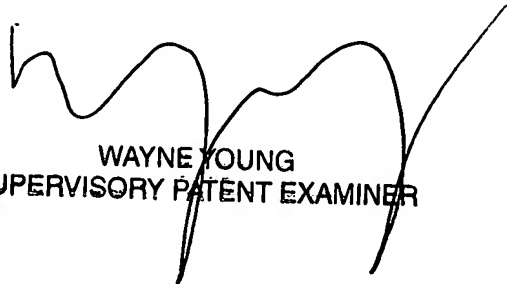
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dionne H. Pendleton whose telephone number is 571-272-7497. The examiner can normally be reached on 10:30-7:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on 571-272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


D. Pendleton


WAYNE YOUNG
SUPERVISORY PATENT EXAMINER